UWTASP

tele-antimicrobial stewardship program

IDWeek Highlights: COVID

Nov 3rd, 2020

IDWEEK

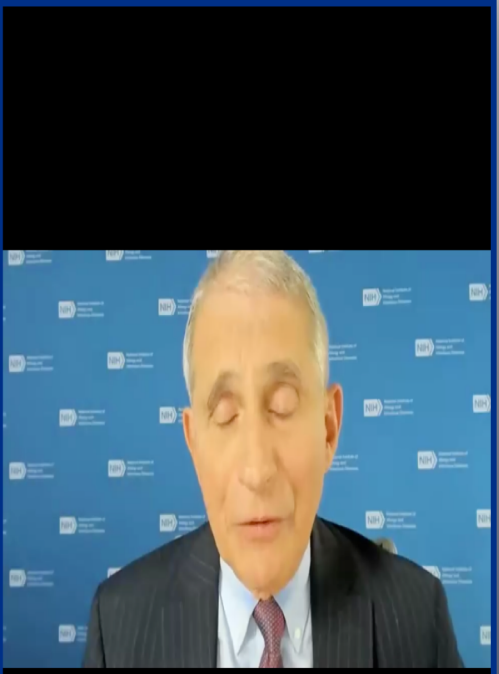
International Conference for the Infectious Diseases Society of America (IDSA)

- Cutting edge research
- International thought leaders present old information in a new way

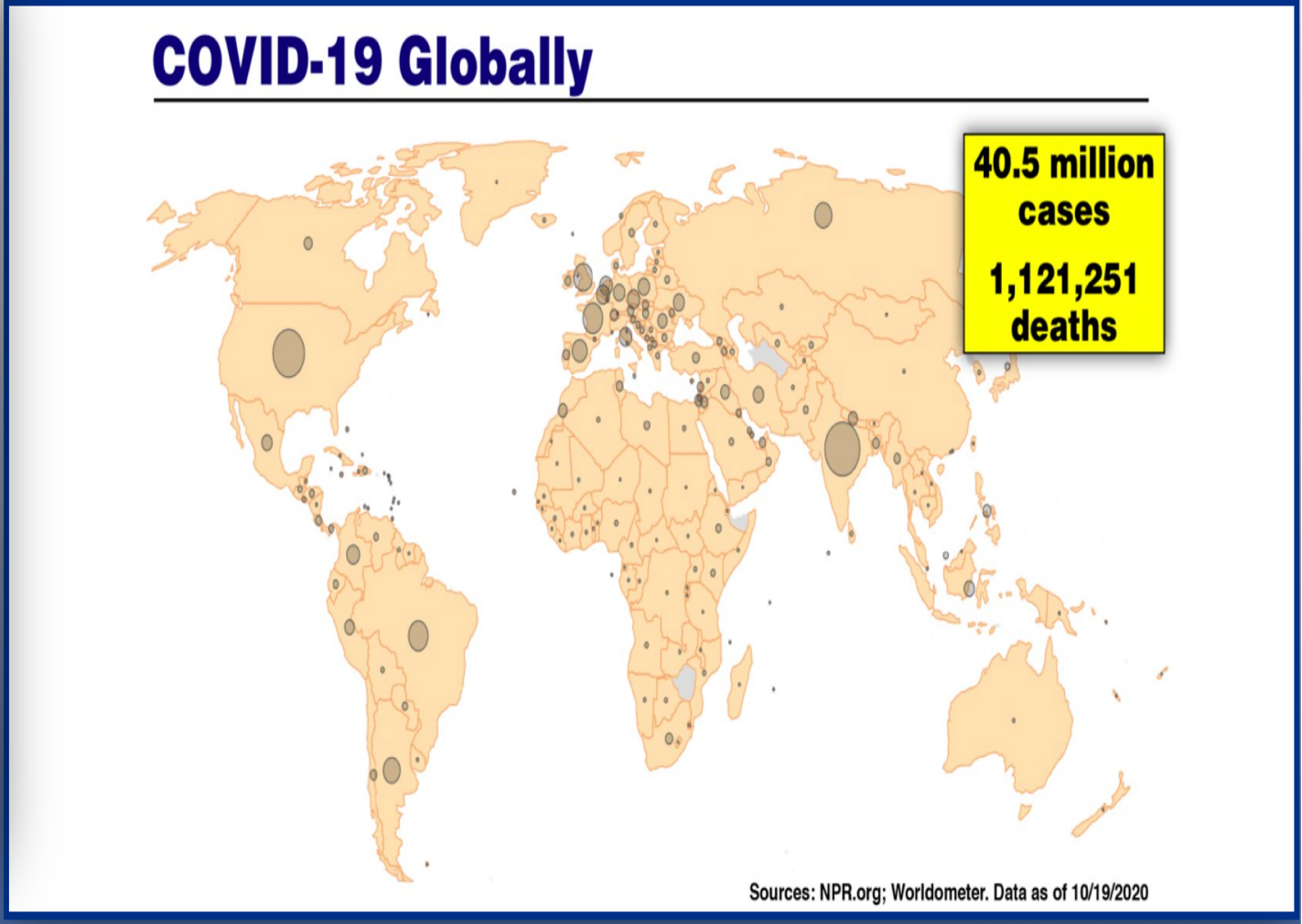
citations

Dr. Fauci starts the conference

VIDEO



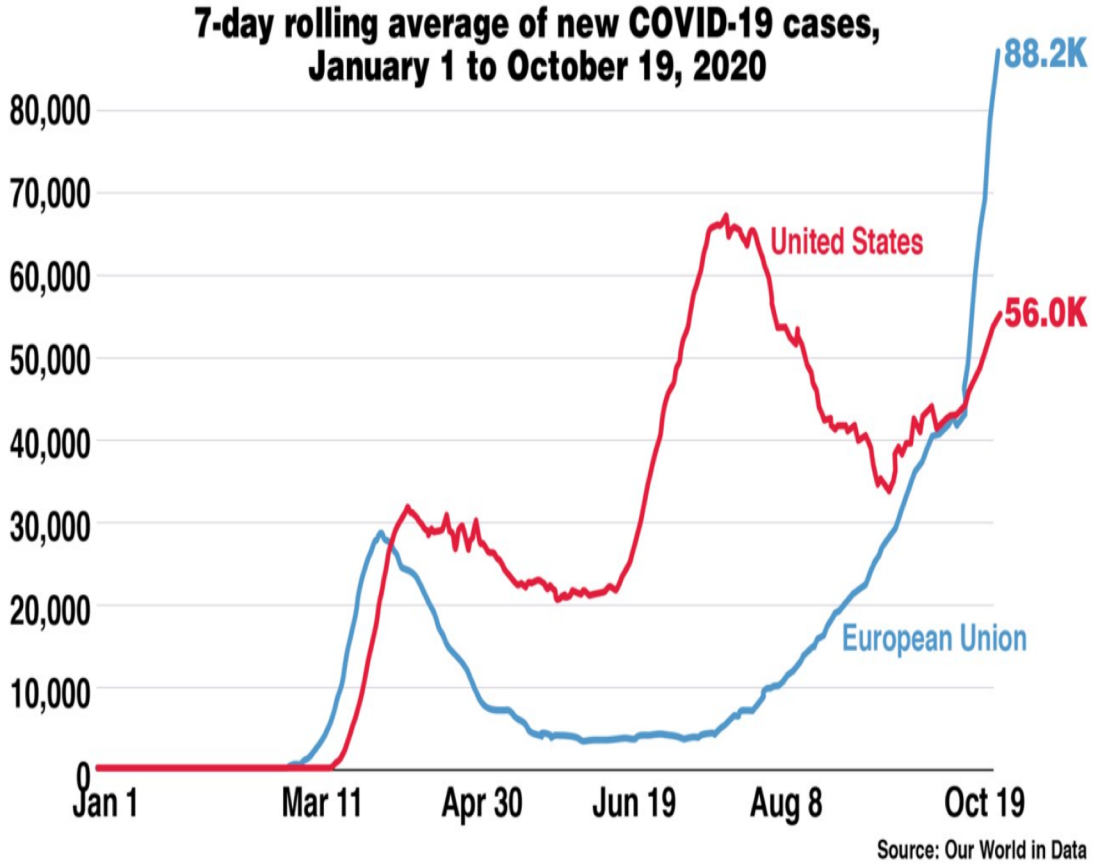
SLIDES



VIDEO

SLIDES

New COVID-19 Cases: US vs. EU

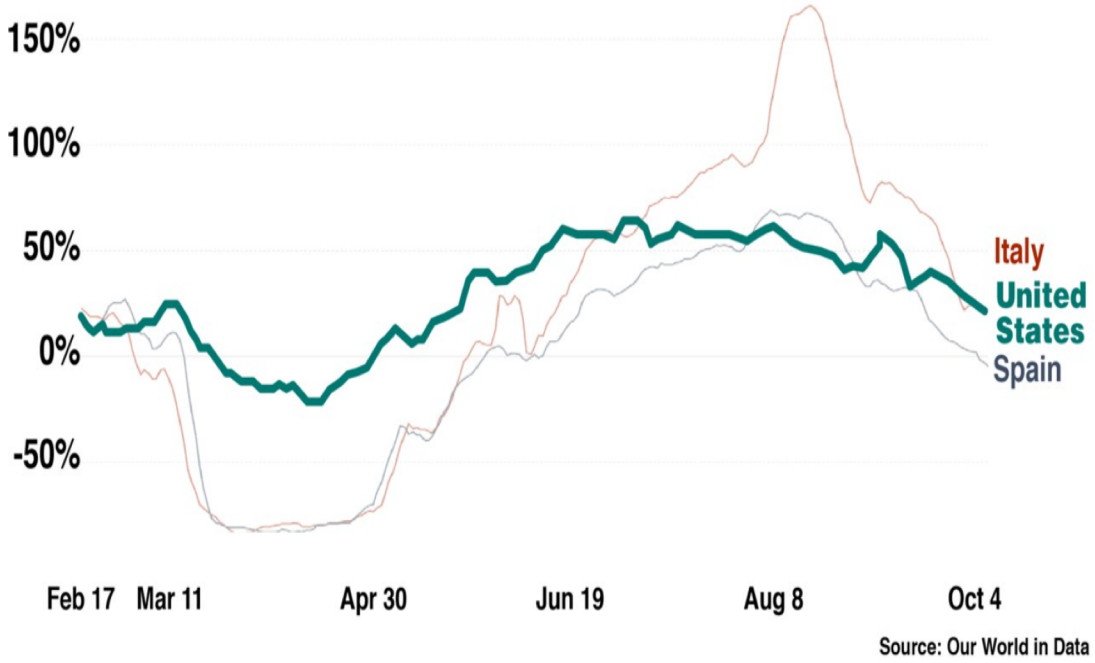


citations

VIDEO

SLIDES

Change in Mobility Over Time: Parks and Outdoor Spaces

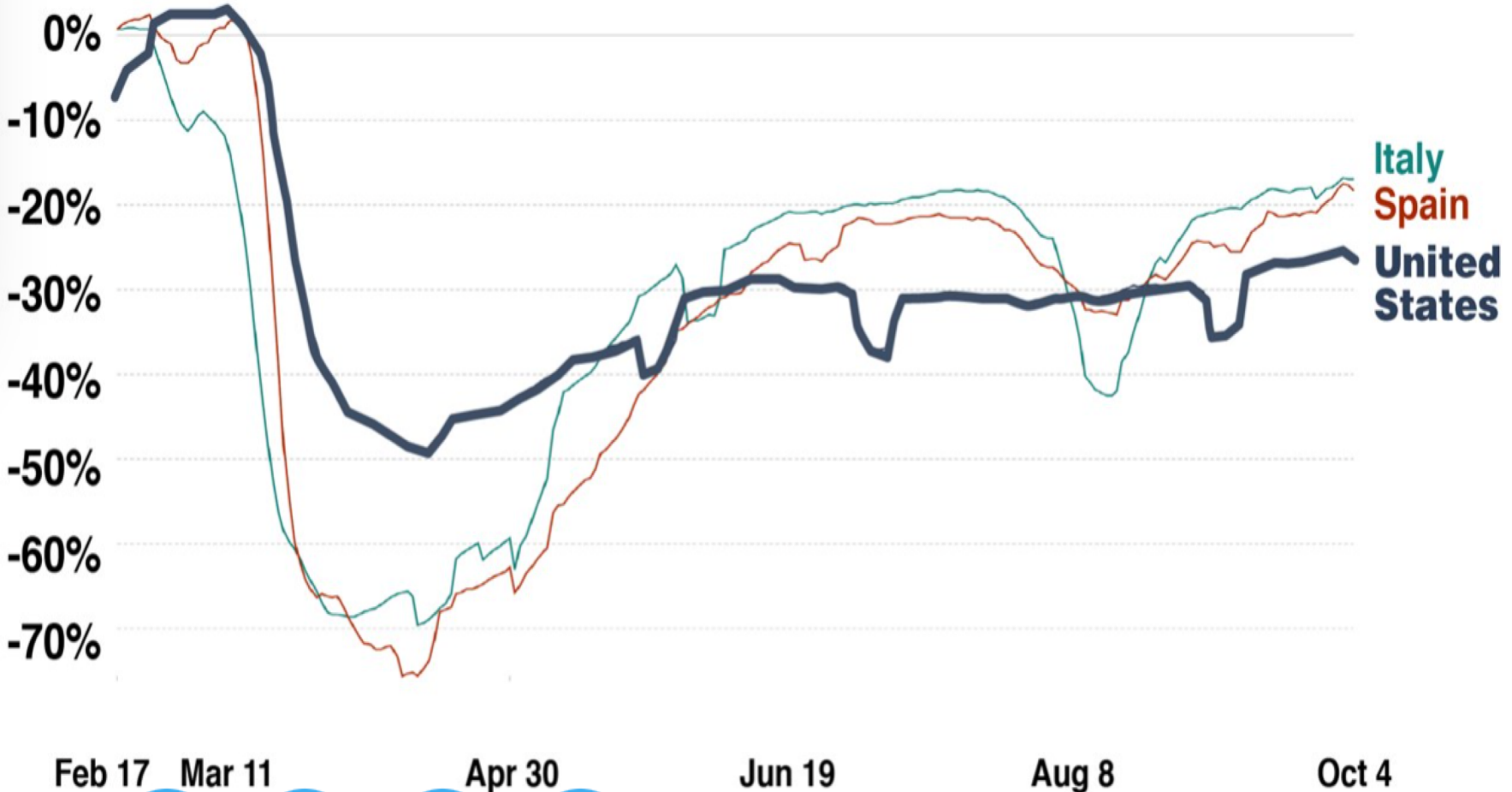


Source: Our World in Data

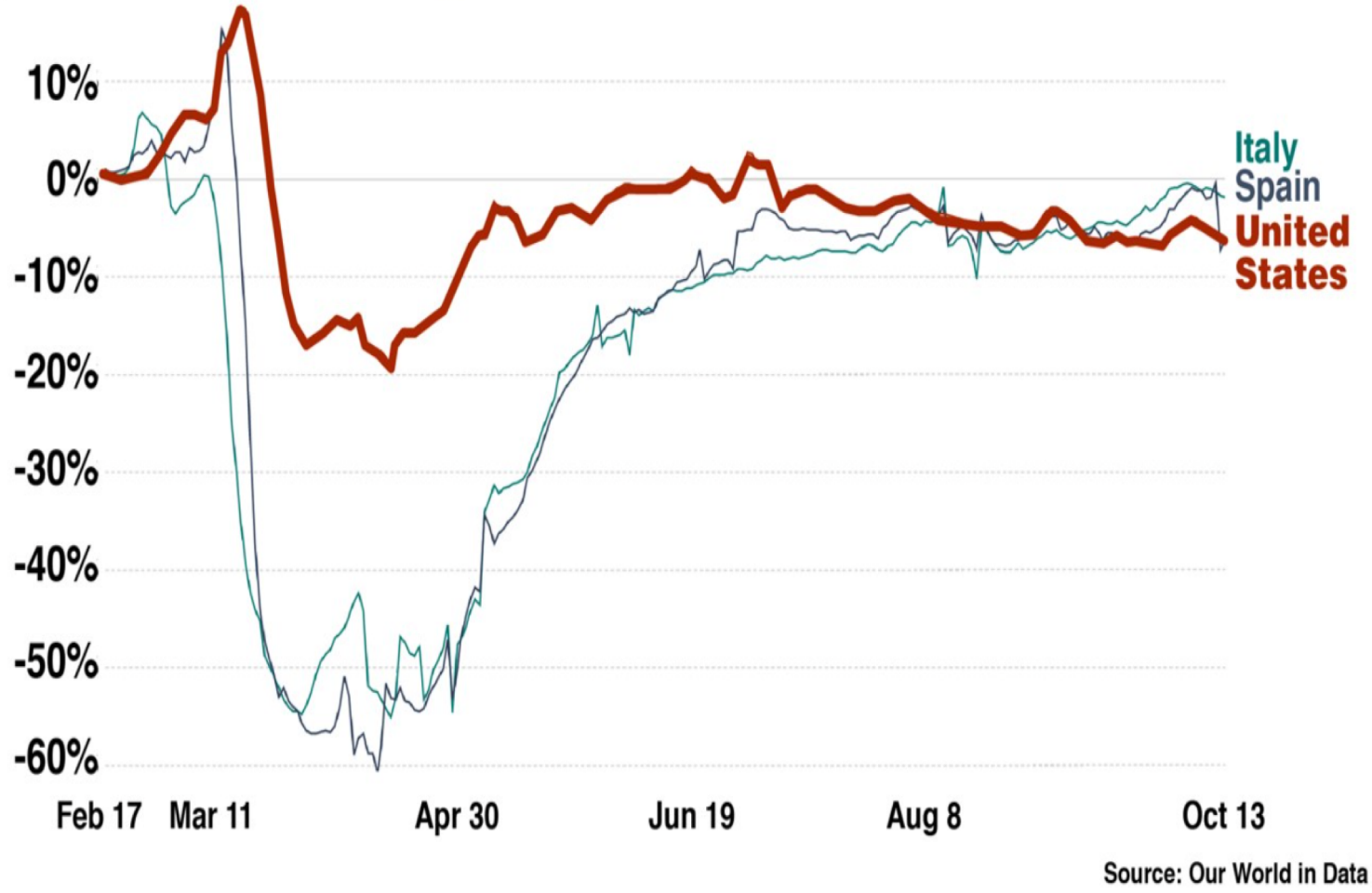
citations

SLIDES

Change in Mobility Over Time: Workplaces



Change in Mobility Over Time: Grocery and Pharmacy Stores



Source: Our World in Data

VIDEO

SLIDES

JAMA
The Journal of the American Medical Association
May 11, 2020

Viewpoint

COVID-19 and Racial/Ethnic Disparities

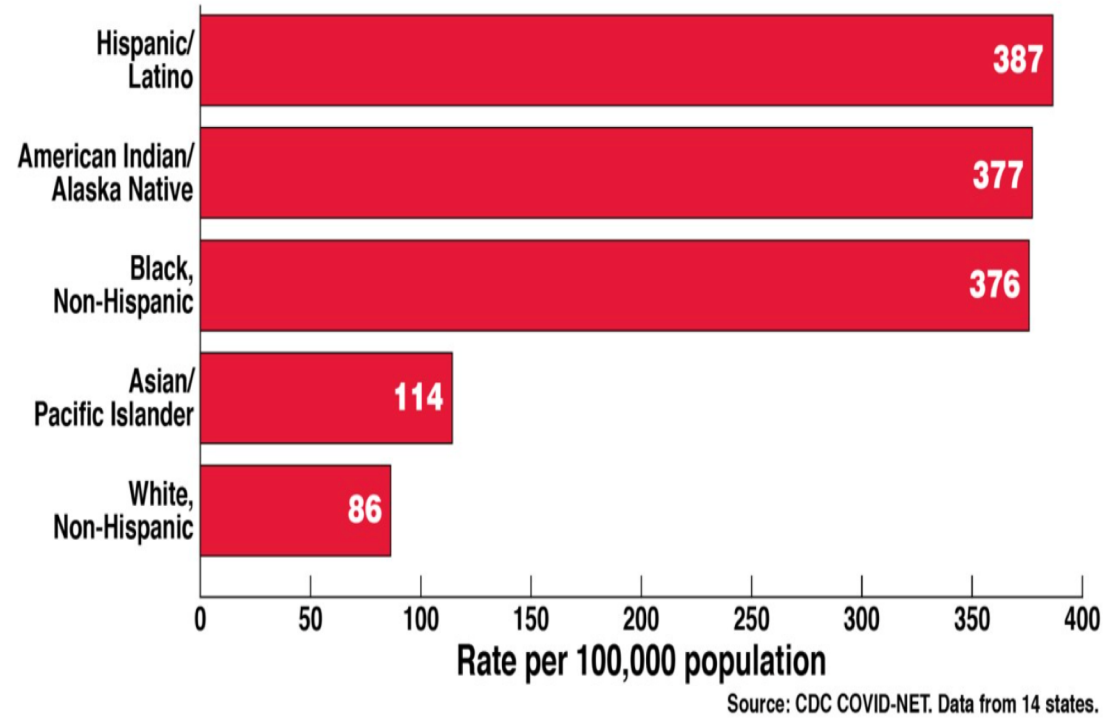
MW Hooper, AM Nápoles and EJ Pérez-Stable

"The most pervasive disparities are observed among African American and Latino individuals, and where data exist, American Indian, Alaska Native, and Pacific Islander populations."

citations

VIDEO

SLIDES



citations

VIDEO

SLIDES

National Institutes of Health
Turning Discovery Into Health

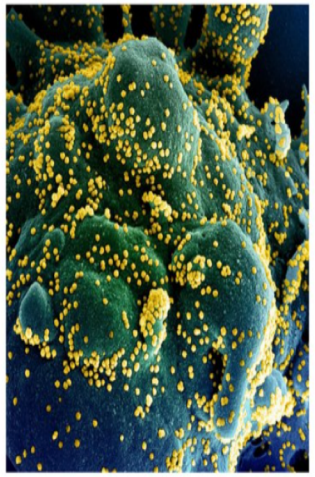
Tuesday, April 21, 2020

News Release

Expert U.S. Panel Develops NIH Treatment Guidelines for COVID-19

"Living document" expected to be updated often as new clinical data accrue

Covid19treatmentguidelines.nih.gov



citations

Remdesivir – FDA approved

October 22, 2020

- **Who:**
  - Hospitalized patients with COVID-19
  - ≥ 12 years old AND ≥ 40 kg
  - EUA will cover hospitalized pediatric patients <12 years old weighting at least 3.5kg
- **What:**
  - RDV 200mg day 1 then 100mg daily x5 days (may be extended up to 10 days)
- **Where:**
  - ONLY in a hospital or acute healthcare setting (=inpatient care)
- **How:**
  - The Fact Sheet should be made available to HCP and patients/caregivers “through appropriate means”
  - Licensed HCP interested in administering should contact Gilead

cit https://www.fda.gov/media/137574/ [Updated 10/23/20]

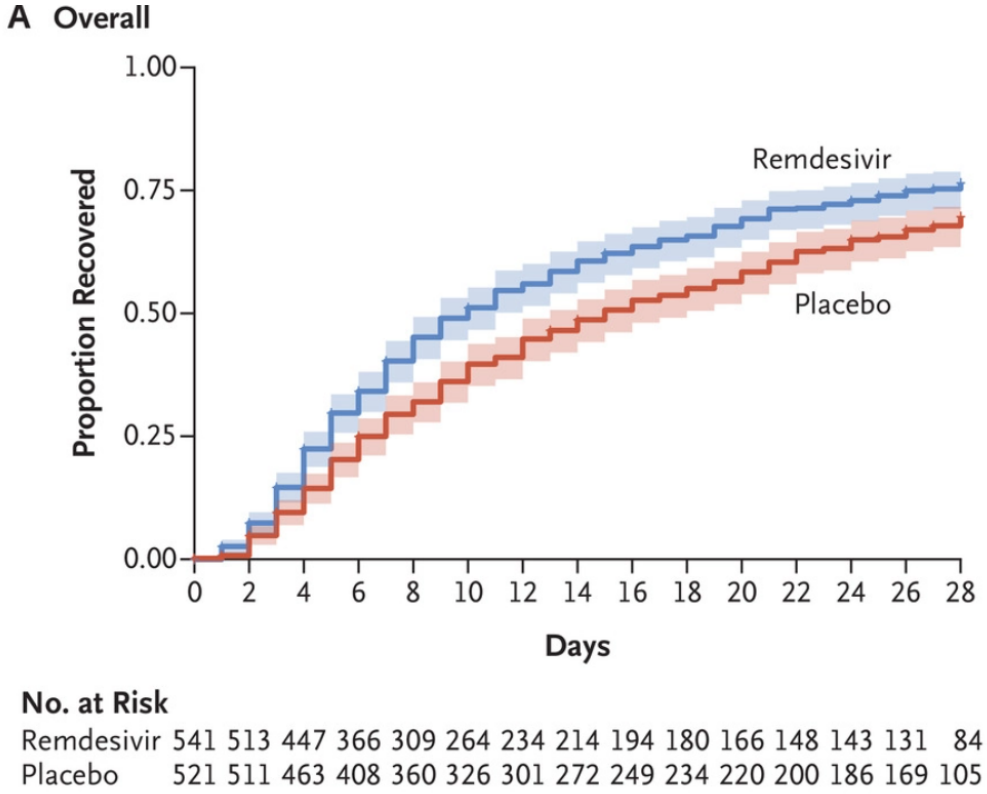
Is Your Institution Using Remdesivir?

- Yes, in all patients hospitalized with COVID-19
- Yes, in patients requiring supplemental oxygen
- Yes, in our sickest patients only
  (high-flow nasal cannula, mechanically ventilated)
- Yes, but not sure which patients we use it in
- No
- Not sure

citations

Expectations vs. Reality
What the Data Show

ACTT: Double-Blind, Randomized, Placebo-Controlled Trial
N = 1062, 541 RDV/521 Placebo
Time to Recovery: 10 days RDV vs. 15 days placebo (RR 1.29, 1.12-1.49)

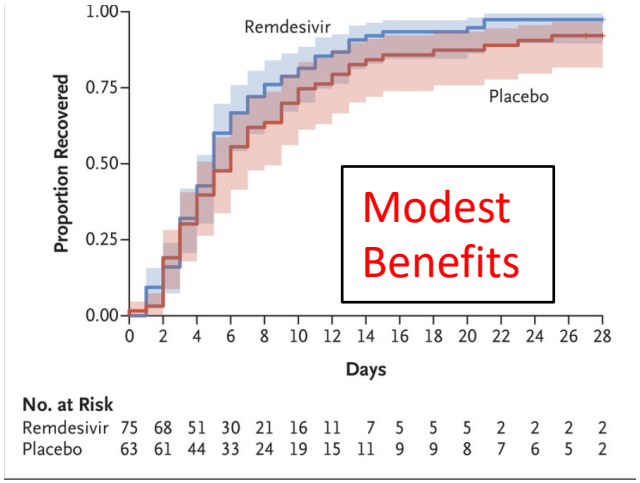


Bottom line:
Remdesivir shortened time to recovery vs. placebo in patients hospitalized with COVID-19 with lower respiratory tract disease

Beigel JH, Tomashek, Dodd, Mehta, Zingman, Kalil, Hohmann, **Chu Helen Y.,** Luetkemeyer A, Kline S, Lopez de Castilla, Finberg et al. DOI: 10.1056/NEJMoa2007764

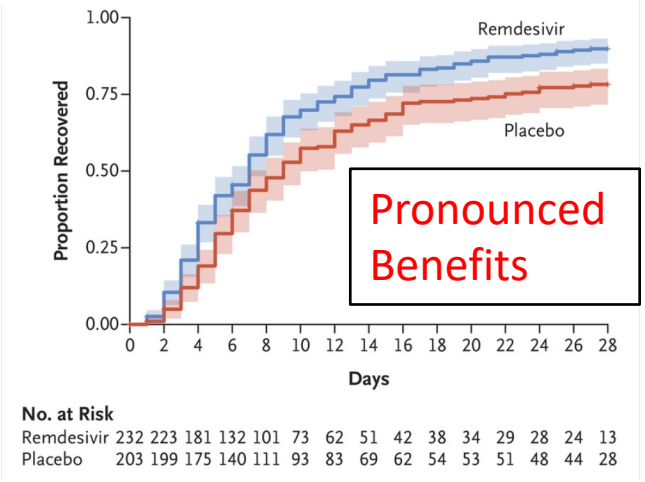
Expectations vs. Reality
What the Data Show

Not receiving oxygen



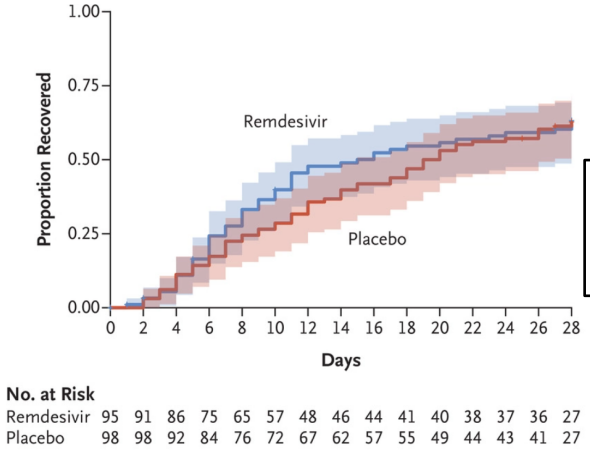
Modest Benefits

Receiving oxygen



Pronounced Benefits

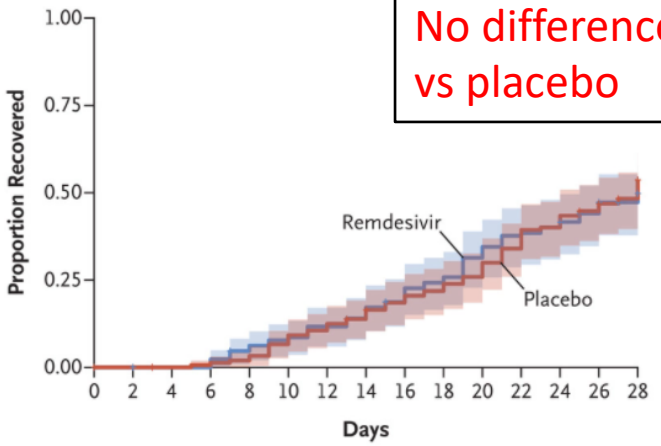
High flow oxygen or noninvasive mech vent



Maybe Benefits

Mech Vent or ECMO

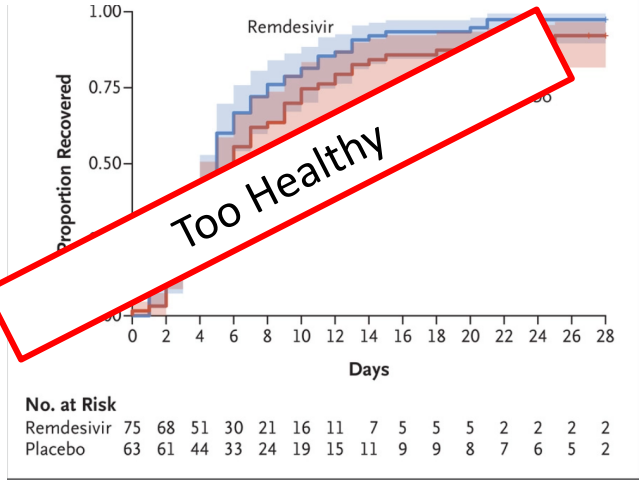
No difference vs placebo



DOI: 10.1056/NEJMoa2007764

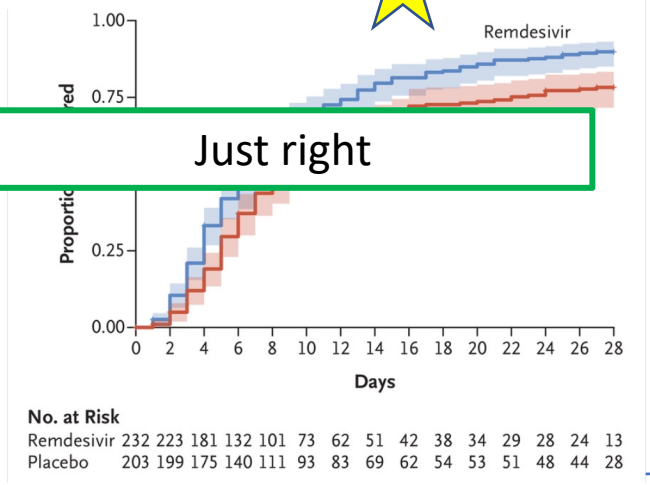
ACTT Interpreted

Not receiving oxygen



Too Healthy

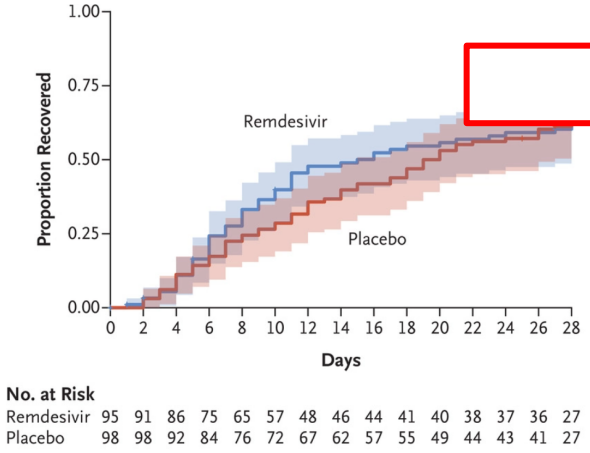
Receiving oxygen



Just right

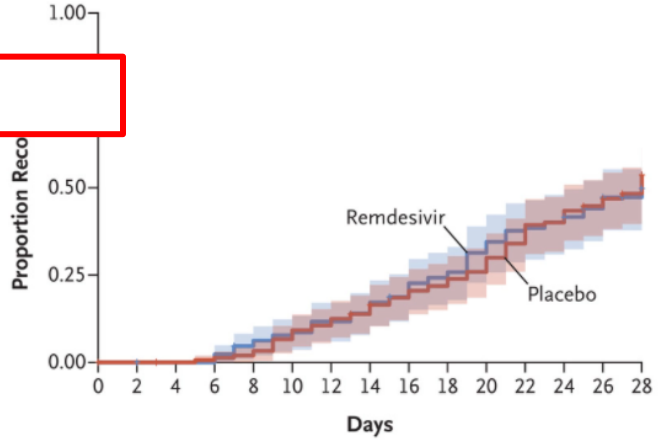
Goldilocks Window

High flow oxygen or noninvasive mech vent



Too Sick

Mech Vent or ECMO



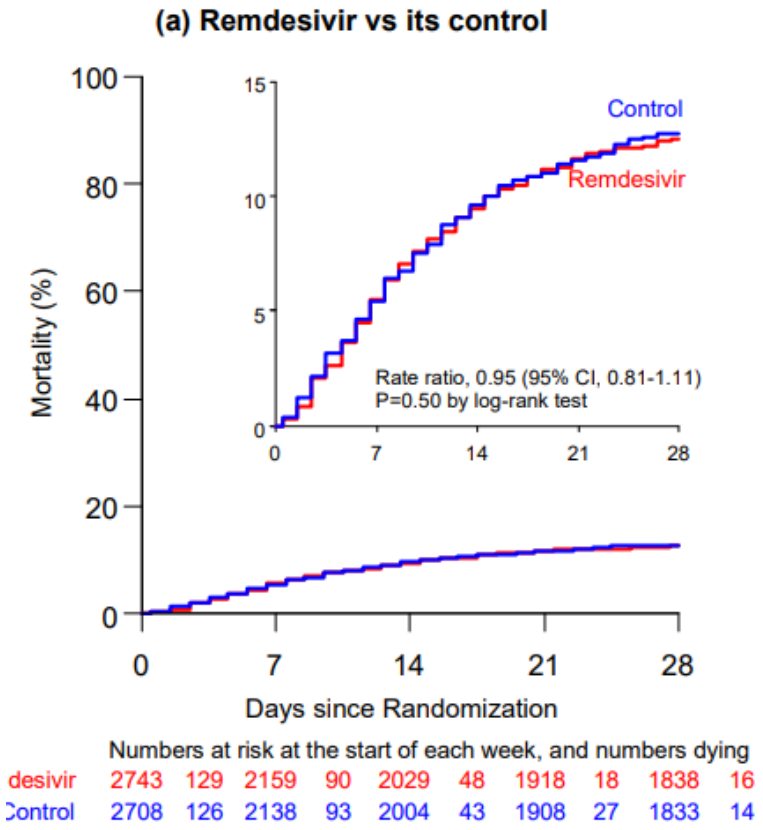
DOI: 10.1056/NEJMoa2007764

Expectation vs. Reality
What the Data Do NOT Show

SOLIDARITY Trial (WHO): Adaptive, open-label, randomized controlled trial
N = 11,266 adults randomized | 2743 RDV, 2708 Control

Bottom Line:
NO Survival Benefit

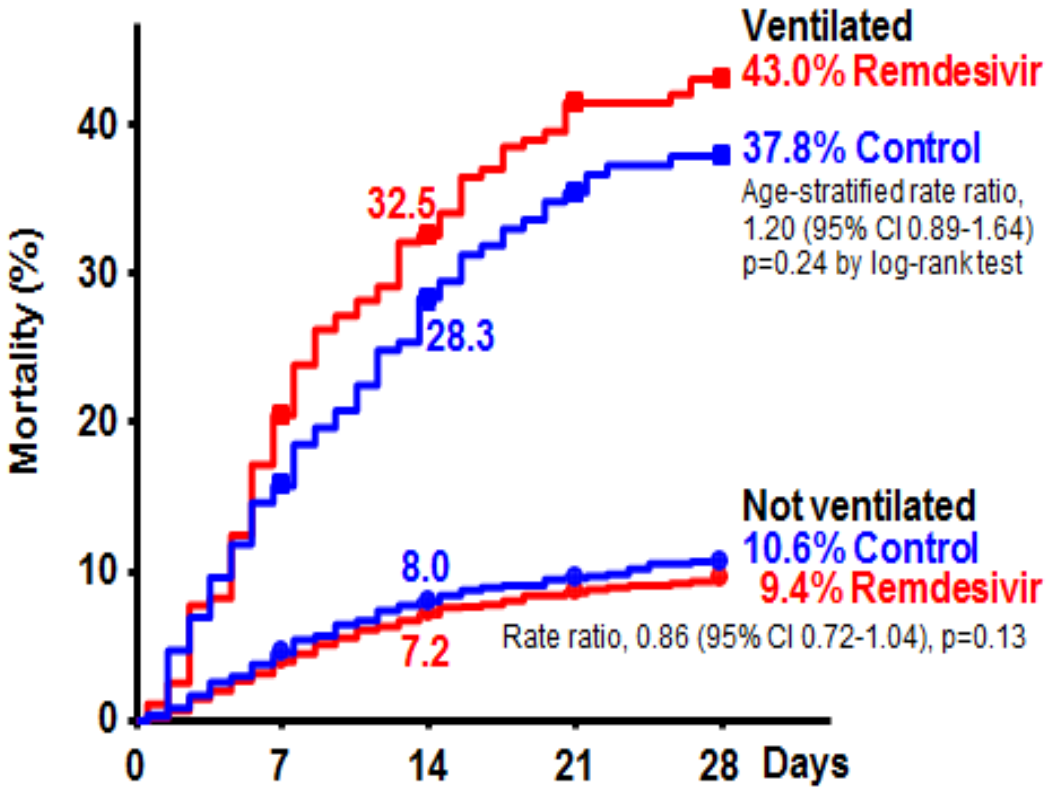
Note: Survival isn't the *only* important outcome, but it is pretty important



https://www.medrxiv.org/content/10.1101/2020.10.15.20209817v1. Posted Oct 15, 2020

SOLIDARITY
No difference in survival

Bottom Line:
NO difference regardless of mechanical ventilation



https://www.medrxiv.org/content/10.1101/2020.10.15.20209817v1. Posted Oct 15, 2020

	ACTT-1	SOLIDARITY
Study Design	Double blinded, placebo controlled RCT	RCT (open label, no placebo)
Study Population	N = 1062 Confirmed CoVID by PCR within 72 hours No limit to duration of symptoms	N = 5451 No consistent diagnostic confirmation Timing of symptoms duration not reported
DSMB	Yes	No
Primary Outcome	Time to recovery (10d vs. 15d, p<0.001)	28d mortality SOC: 12.7%, RDV: 12.5% p=NS
Secondary Outcome	28d mortality (SOC: 15%, RDV: 11%, p=NS)	Time to ventilation, hospital length of stay (p=NS)
Quality of Evidence	Low risk of bias High quality	High risk of bias Low quality

citations

Now What?

Clear

Goldilocks Window: Hospitalized requiring supplemental O_2

Nearly nil benefit in mechanically ventilated pts

Administering to pts without need for supplemental O_2

Use in patients > 10 days after symptom onset

Murky

https://www.medrxiv.org/content/10.1101/2020.10.15.20209817v1. Posted Oct 15, 2020

IDSA Recommendation (Updated 9/15/20)

Section last reviewed and updated 9/15/20

Recommendation 9: In hospitalized patients with severe* COVID-19 (SpO_2 ≤94% on room air; on supplemental oxygen, mechanical ventilation, or ECMO, the IDSA panel suggests remdesivir over no antiviral treatment. (Conditional recommendation, Moderate certainty of evidence)

- **Remark:** For consideration in contingency or crisis capacity settings (i.e., limited remdesivir supply): Remdesivir appears to demonstrate the most benefit in those with severe COVID-19 on supplemental oxygen rather than in patients on mechanical ventilation or ECMO.

*Severe illness is defined as patients with SpO_2 ≤94% on room air, and those who require supplemental oxygen, mechanical ventilation, or ECMO.

Recommendation 10: In patients on supplemental oxygen but not on mechanical ventilation or ECMO, the IDSA panel suggests treatment with five days of remdesivir rather than 10 days of remdesivir. (Conditional recommendation, Low certainty of evidence)

- **Remark:** In patients on mechanical ventilation or ECMO, the duration of treatment is 10 days.

Recommendation 11: In patients with COVID-19 admitted to the hospital without the need for supplemental oxygen and oxygen saturation >94% on room air, IDSA suggests against the routine use of remdesivir. (Conditional recommendation, Very low certainty of evidence)

citations

NIH Recommendation (Updated 10/9/20)

Recommendation for Prioritizing Limited Supplies of Remdesivir

- Because remdesivir supplies are limited, the Panel recommends prioritizing **remdesivir** for use in hospitalized patients with COVID-19 who require supplemental oxygen but who do not require oxygen delivery through a high-flow device, noninvasive ventilation, invasive mechanical ventilation, or extracorporeal membrane oxygenation (ECMO) **(BI)**.

- Panel can not make a recommendation *either for or against* remdesivir:
  - Uncertainty for patients requiring high-flow, mechanical ventilation, ECMO
  - Insufficient data for patients with mild or moderate disease without oxygen requirement

citations